

**Notice of Allowability**

Application No.

09/657,833

Examiner

Devona E. Faulk

Applicant(s)

SHUTTLEWORTH, TIMOTHY

Art Unit

2644

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 6/16/2005.
2. ☒ The allowed claim(s) is/are 3-12,14,17-20,36-39,42 and 44-51.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
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PRIMARY EXAMINER

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## **DETAILED ACTION**

### ***Response to Remarks***

1. The applicant agreed to an examiner's amendment to put the claims in allowable form. The applicant also desired to change the title of the specification.
2. Claims 1,2,13,21-23,29-30 and 32 have been cancelled.

### **EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Sung Oh (Reg. No. 45,583) on December 8, 2005.

#### **The specification is amended as follows:**

**Title page, Title change:** Replace "SYSTEM AND METHOD FOR SYNCHRONIZING THE CLOCK FREQUENCIES OF POWER PROCESSING DEVICES AND DIGITAL SIGNAL PROCESSING DEVICES IN AN ELECTRONIC SYSTEM" with -- CLOCK SYSTEM CAPABLE OF SYNCHRONIZING CLOCK FREQUENCIES OF POWER PROCESSING DEVICES AND DIGITAL SIGNAL PROCESSING DEVICES --.

#### **The claims are amended as follows:**

**Claims 21-35,40,41 and 43:** Cancel.



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**Claim 3, line 4:** after "a", insert - - first - - .

**Claim 3, line 4:** after " device;" insert - - a second pulse width modulated (PWM)  
power processing device; - -.

**Claim 3, line 5:** after "clock", insert - - within - - .

**Claim 3, line 7:** after "where the", insert - - first and second - - .

**Claim 3, line 7:** replace "device is ", with - - devices are - - .

**Claim 3, line 8:** after "where the", insert - - first and second - - .

**Claim 3, line 8:** replace "device uses ", with - - devices use - - .

**Claim 3, line 8:** replace "its" , with - - their - - .

**Claim 3, line 10:** after "where the", insert - - first- - .

**Claim 3, line 10:** replace "includes", with - - is - - .

**Claim 4, line 1:** after "where the", insert - - first - - .

**Claim 5, line 1:** after where the ", insert - - second- - .

**Claim 5, line 2:** replace "further includes", with - - is - - .

**Claim 9, line 4:** after "a" , insert - - first - - .

**Claim 9, line 4:** after " device;" insert - - a second pulse width modulated (PWM)  
power processing device; - -.

**Claim 9, line 5:** after "clock", insert - - within - - .

**Claim 9, line 7:** after "where the", insert - - first and second - - .

**Claim 9, line 7:** replace "device is ", with - - devices are - - .

**Claim 9, line 8:** after "where the", insert - - first and second - - .

**Claim 9, line 8:** replace "device uses ", with - - devices use - - .



**Claim 9, line 8:** replace "its" , with - - their - - .

**Claim 14, line 3:** after "a" , insert - - first - - .

**Claim 14, line 3:** after " device;" insert - - a second pulse width modulated (PWM) power processing device; - - .

**Claim 14, line 4:** after "clock", insert - - within - - .

**Claim 14, line 6:** after "where the", insert - - first and second - - .

**Claim 14, line 6:** replace "device is " , with - - devices are - - .

**Claim 14, line 7:** after "where the", insert - - first and second - - .

**Claim 14, line 7:** replace "device uses " , with - - devices use - - .

**Claim 14, line 7:** replace "its" , with - - their - - .

**Claim 14, line 9:** after "where the" , insert - - first and second - - .

**Claim 14, line 9:** replace "device uses" with - - devices use - - .

**Claim 39, line 2:** after "clock", insert - - , located within a digital signal processor,

- - .

**Claim 39, line 3:** replace "processing device", with - - supply - - .

**Claim 39, line 4:** replace "processing device", with - - supply - - .

**Claim 39, line 4:** after "and" , insert - - a pulse width modulated (PWM) power amplifier that uses the clock frequency for its operation; and - - .

**Claim 39, line 5:** replace "a", with - - wherein said - - .

**Claim 39, line 5:** before "uses " , delete "that".

**Claim 39, line 6:** replace "processing device", with - - supply, - - .

**Claim 39, line 6:** before "and the", insert - - the PWM power amplifier- - .



**Claim 42, line 1:** replace "41" , with - - 39 - - .

**Claim 44, line 1:** replace "43", with - - 39 - - .

#### **EXAMINER'S AMENDMENT**

4. Claims 3-12,14,17-20,36-40,42,44-51.
5. The following is an examiner's statement of reasons for allowance:

Prior art Rowan ( US 5,986,426) discloses an adaptive pulse width modulated motor control that discloses of a clock within a DSP supply a clock signal to a PWM processing device. Prior art Abdondanti (US 4,099,109) discloses a digital apparatus for synthesizing pulse width modulated waveforms and digital pulse width modulated control systems. Prior art Ferland (US 5,883,523) discloses of coherent switching power for an analog circuit testing having a master clock source. Prior art Watanabe (JP 11-191251) discloses a recording and reproducing device. Prior art Adrian et al. (US 5,617,058) discloses digital signal processing for linearization of small input signals to a Tri-State power switch. Adrian discloses a timing reference but it is not used by the power supply the amplifier and the DSP. The prior art or combination thereof fails to disclose a DSP having a clock, a first and second PWM processing device using the clock for their operational frequency, wherein the first PWM processing device is a PWM power supply, and where the first and second PWM processing devices and the digital signal processor used the clock for their operational frequency. The prior art or combination thereof also fails to disclose or make obvious a DSP having a clock, a PWM power amplifier ,a PWM power



supply and the DSP using the clock as their operational frequency. Therefore, the prior art or combination thereof fails to disclose make obvious a system capable of synchronizing clock frequencies of power processing devices and digital signal processing devices as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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